

V^E COLLOQUE TIC & TERRITOIRE : QUELS DEVELOPPEMNTS ?

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NEW CHALLENGES OF KNOWLEDGE TRANSFER IN 21ST CENTURY IN HUNGARY

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Due to the technical-technological changes connected with the processes of globalization the phenomena associated with knowledge has been more and more highlighted even in the southern part of Europe. Thus the new ways of obtaining knowledge - that are available for an increasing number of people - has more and more often seemed to be in the focus of researches. It has become obvious by now that the task challenges not only our economy but the whole Hungarian society: we have been integrated into the society of European knowledge. Therefore the challenge - for Hungary, as well - of obtaining new knowledge is given in the terms of the country's EU-accession. European integration involves our joining the system of world economy with its new network-type structure and our entrance through gates: into the global cognitive society.

From the point of view of our education system the above-mentioned challenge can be summarized in the form of the following three questions:

- Can the fields of education and training effectively contribute to the integration of Hungarian society and economy,
- Can they make the most of the advantages and opportunities resulting from our EU-accession,
- Have they been able to prepare for the challenges issuing from the fact that Hungary has to operate its education system as a member of a larger society?

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The operation of modern economy and society has increased the demand for knowledge in almost every sector making the societies of developed countries reflect. We can only meet this challenge if we can decrease the number of people staying still outside the circle of learners and ensure - on the level of the whole society - people enough time to learn. We should set the establishment of „learning society” as an aim, since without this it is becoming impossible to operate our more and more „knowledge-based” economy. The paradigm of lifelong learning must set our education system new tasks. We have to revise the problem of applied methods and tools in the context of teaching and learning.

The exclusive application of traditional methods and workforms - having been proved effective for decades - makes no headway any longer.

The final act of the Lisbon General Assembly of European Council provides the following recommendation regarding the transformation of schools: *„Educational institutes should be transformed into multi-purpose learning centres. They should be able to address target groups significantly wider than those at present and to establish learning partnerships of a new type with other educational institutions, research institutes and companies.”*

As a consequence of this educational and vocational institutions should be opened out towards both the close, local and the far, global world to an increasing extent. It is the enriching, expanding learning scene of growing complexity that should have priority in addition to learning and learning opportunities.

For these new learning scenes we can anticipate an extremely heterogeneous composition of students: from the point of

view of both their age and their sociocultural background. Thus instead of traditional pedagogical approach highlighting teachers’ activity the emphasis should be laid on a learner-centered practice focusing rather on individual skills and their differences.

Regarding content the strengthening of basic skills and providing participants with a general culture are seen as key issues by the authors. We think it appropriate to establish modular-type general education and vocational training - preceded by and based on an extensive foundation period – including all the key competencies (skills) that are necessary for the members of („knowledge-based”) information society:

managerial skills,
ability to take risks and avoid failures,
creativity, initiative,
flexibility, adaptability, ability to react promptly,
innovative workstyle and capability of adjustment to organizational structures („team-work”).

To achieve this aim it is necessary to widen the traditional learning environment and to ensure new learning „situations” providing knowledge equivalent to that obtained at schools. Basically, those changes are concerned that were evoked by the „communication revolution” and globalization processes connected with it. As it is anticipated one of the most important consequences of these quite complicated and complex changes influencing each sector of the society and economy will be a significant decrease in the number of workplaces. The remaining ones however will be of service to the labour market (and employment policy) providing with good means of subsistence the labour with a complex qualification and armed with the new elements of knowledge and new competencies.

One of the most important - from the point of view of the operation of schools as well – consequences of the crucial changes may make it possible to *widen the teaching/learning place and time* that are essential in terms of education. This means that those places and participants that can take part in the educational activity in a real or virtual form should be seen as the elements of the school, the educational and the modular content. What matters here is the qualitatively new dimensions of distance learning on the basis of e-based learning. In the actual Hungarian circumstances this can be established on the basis of the forming

1. regions of intelligence that - through their networks - can be suitable for the establishment of cooperation needed for education. The participants of this cooperation can be first of all:
2. telehouses,
3. e-homes,
4. e-workplaces and certainly
5. e-schools.

The „learning scenes” listed above can be formed and made suitable for being used by the learners through the experts employed by them on the one hand and through the available infrastructure on the other hand.

In addition to the above-mentioned requirements it cannot be avoided either to decrease the differences between traditional, school-based education and the forms of education and training outside it which should involve not only the mutual application of the applied methods (among others), but also e.g. the assessment and recognition of preliminary, unregistered knowledge.

The education of all the people having stayed outside the world of education so far will be a key issue in the near future.

What can be those target groups in the society that are unavoidable to contact and educate in non-formal and informal education:

uneducated and poorly educated people,
young people starting out on a career being unemployed,
the elderly (over 45 years) unemployed,
unemployed women (with a large family or single with a child or children),
families and individuals having social conflicts,
people living in disadvantaged regions or settlements,
people living in an industrial area of depression,
partially disabled and handicapped people,
the majority of Romany inhabitants, children in care,
people having released,
individuals having difficulties in adopting themselves to the society (drug and other addicts, people showing the symptoms of depression, sociopaths).

From the point of view of education the groups listed above seem to have more problems that are difficult to solve:

1. the identification of target groups and individuals and leading them to learn,
2. the mobilization of their motivation basis in order to make them learn,
3. and finally the fact that the people in concern can have more than one of the problems (accumulated) listed above.

Education (policy) - by itself - is not able to handle and solve this quite complex problem effectively. For this learners in concern need social partners with at least one of the competencies needed for education. Who can be these cooperating partners of a person wishing to learn?

First of all local governments, civil organizations, human resources centres, agencies, scientific institutions (colleges, universities, research & development institutions), social partners, and last but not least public educational and cultural institutions.

The requirements towards adult education should be met. The identification of problems and the formulation of questions depend on the particular institutions and the content and quality of the answers given by them will already determine the place and role they can take on the education market.

The system we have established is communication-centered. We aimed at ensuring free scope for cooperation supporting communication processes needed for this rather than providing a methodological recommendation. That is why our system is called Cooperation Space, i.e. CooSpace.

From the point of view of technology CooSpace is a web-based, multi-tier web application. The servers side platform is MS .NET II. The service can be suitable for a significant workload. Cache applied for XML datastructures on several levels of logical units. The system can be connected with other systems – which means data synchronization and authorization support - by software interfaces. The development was accomplished by DEXTER Ltd.

Reason for the existence of such an Internet-based educational system in the actual Hungarian circumstances can be questioned. The speed at which new technologies can spread seems to be a very important factor from the point of view of society. How far have we got in the process revolutionary character of which is indisputable even in its different interpretations and which is commonly called: information society.

According to the survey by World Internet Project (WIP) of autumn, 2004 the Internet is used by more than 29% of the Hungarian population of more than 14 years of age. According to the diffusion theory the spread of devices shows an S-shape characteristic. This means that after an initial period of usage by the elite the spread of a devices begins to accelerate and have a mass character until the phase of saturation when the growth slows down again. Examining the situation in Hungary - in order to determine the phase in which we currently are regarding the use of the Internet - we can find that the period of mass usage is approaching. The rate of growth in the last year exceeded that of the preceding one again. The number of people using the Internet at home and also the general rate of the usage are increasing. This suggests that in the next few years there could be a decisive change in the use of the Internet in Hungary. It can be certainly shown that the ratio of Internet users is much lower within the old generations than in the younger ones. A survey by TÁRKI compared the reasons for not using the Internet on the basis of the data from 2000 and 2004. The survey revealed that the most significant change is that while arguments based on financial, possession-related reasons became less emphasized, the reason „I do not need one” got of much greater importance. This change in the system of reasons shows that our cultural models concerning the use of the infrastructure of infocommunication has not been able to keep up with the

actual opportunities. An educational situation as well can be suitable for establishing the circumstances in that the opportunity for transforming these models can be revalued. One of the main points of planning both in the institutional background of general and higher education and the e-Hungary program of local governments is the establishment of networks that can serve as a background of the content demonstrated in the educational system. According to the survey by TÁRKI we can say - on the basis of the regression path analysis revealing the reasons of not using the Internet - that the most important factor urging people to use the Internet is cultural capital. Thus we can claim that financial support is not the only form of making the use of the Internet more common. It means that the development of education should handle this field with special care.

One of the most important processes in relation to the formation of information society is the use of the computer as a communication device, i.e. the development of infocommunication technology. Examining the rapid spread of mobile telephony through Hungary, we can see that people find communication one of the most attractive field of application. This preference of theirs can open up a new prospect to education too, since education as well can be perceived as a special communication situation.

The significance of information society lays in the fact that - thanks to the use of computers – communication devices are functionally dynamic. This feature of these devices enables them to meet new requirements very quickly. Parallel to this the preparedness of individuals is changing more and more rapidly and sharply. The relevant preparedness tends to mean the ability to access and obtain preparedness itself rather than the ability to store information like an encyclopaedia. Thus approaching to information society we should establish education systems that are

suitable for the mobilization of learning skills of the society. This change is the key to the use of new technology.

On the basis of the above-mentioned facts we decided that bringing Internet technology in - should not be the only possible - but a necessary element of our education system.

CooSpace System developed in cooperation between academic and private expertise is artlessly communication-centered. Real cooperation takes place on the virtual scenes of application. Participants are joined the particular scenes through their roles. It is the participants' role to determine the tools using which participants can make appointments and organize their communication freely. Assignments can be provided and the students' papers can be „handed in” uploaded in a form of a file. Teachers and tutors can evaluate these then, but they can also produce an automatic-type test. In the communication of participants the synchronic and asynchronic services (chat-room, forums) used in traditional virtual classrooms are also available. Documents, mediafiles and bibliographics items can be shared on a scene. In addition to the simple messenger services used among the participants notification and exchange of information are also assisted by messages on automatically generated events. The regulation of the access can ensure that confidential material is available only for people concerned. CooSpace is a shared bag of tools rather than a methodology.

It is an interesting feature of the cooperation scene that participants can form smaller groups that are allowed to create a subscene where the members of the group can work on a particular task on their own. CooSpace certainly provides participants with basic contact information (address, e-mail address), but the participants also have a possibility to upload their photos to make their relationships more personal.

The learning environment can first of all be used for assisting education forms where there are also personal meetings that can significantly contribute to the development of motivation and engagement.

Orientation and intuitive use are helped by the task-oriented design of screens and the appearing icons. The students did not have any problems with the user interface of the application. The methods applied in the programs should fit to the user-friendly environment, which can significantly contribute to motivating subjects to learn: continuously stimulating them to participate in the program. The Coospace pilot successfully passed its first tests according to survey results.

The Coospace system is also used internationally (currently in English) as a tool of scientific communication in the CAENTI (Coordination Action of the European Network of Territorial Intelligence) project.

The toolbar of the system is still being developed. Our goal is to widen it on and to create a multilingual surface. In the future Coospace will be available in French and Spanish.

It can also be aided by developing differentiated, individual school career of students due to which it will be possible to decrease the number of dropouts, and the ratio of students leaving the system.

We are convinced that developing the system is just one aspect of producing a new learning environment but that can help to organize and accomplish trainings in a flexible form and it can contribute to the application of innovative educational forms in Hungary.

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